



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

SCHENDEL et al.

Group Art Unit: 1655

Application No.: 09/646,892

Examiner: Arun K. Chakrabarti

Filed: October 6, 2000

Attorney Dkt. No.: 100564-00033

For: T CELL RECEPTOR EXPRESSION CASSETTE

AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

Date: March 27, 2002

Sir:

In reply to the outstanding Office Action dated December 5, 2001, please amend the application as follows:

IN THE CLAIMS:

Please amend claims 19, 20 and 22 as follows:

19. (Amended) A cell as claimed in claim 17, characterized in that it expresses one or more accessory molecules required for exercising T cell function.

20. (Amended) A cell as claimed in claim 17, characterized in that the accessory molecules are selected from the group consisting of CD3, CD4, CD8, cytokines, IL-2, TNF and any combination thereof.

22. (Amended) A cell as claimed in claim 17, characterized in that it is selected from the group consisting of T cell clones and T cell lines 34, molt-4, Peer and Jurkat and variants thereof.

REMARKS

Claims 1-26 are pending in this application. By this Amendment, claims 19, 20 and 22 are amended. No new matter is added.

Section 112, Second Paragraph, Rejection

The Office Action rejects claims 19-20 and 22 under 35 U.S.C. § 112, second paragraph, as being indefinite for containing asserted informalities. Applicants believe that this rejection is overcome with the above-amended claims 19, 20 and 22. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, second paragraph are respectfully requested.

Section 102/103 Rejections

The Office Action rejects claims 1-3, 7-10, 13-18 and 23 under 35 U.S.C. § 102(e) as being anticipated by Ward et al. (U.S. Patent No. 6,165,745). This rejection is traversed.

Ward et al. describe expression vectors containing TCR V α - and V β -single variable domains, which are coupled to each other via a synthetic peptide linker, used for recombinant expression of single chain heterodimeric TCR V α /V β -domains. In contrast to the presently claimed invention, the expression vectors described by Ward et

al. do not enable the combined expression of TCR V-domains with TCR C-domains resulting in a native, two-chain TCR consisting of TCR-V and C-domains. Moreover, Ward et al. does not contain any hint regarding the simultaneous expression of TCR V- and C-domains as described in the present application so as to form a native two-chain TCR. Consequently, the subject matter of the presently claimed invention is novel and would not have been obvious over Ward et al.

For at least these reasons, reconsideration and withdrawal of the rejection of claims 1-3, 7-10, 13-18 and 23 under 35 U.S.C. § 102(e) are respectfully requested.

The Office Action also rejects claims 1-3, 8, 11, 13 and 16-23 under 35 U.S.C. § 102(e) as being anticipated by Eshhar et al. (U.S. Patent No. 5,906,936). All of the pending claims are also rejected under 35 U.S.C. § 103(a) as being obvious over Eshhar et al. in view of one of Bitler et al. (U.S. Patent No. 6,140,484), Waldron (U.S. Patent No. 6,048,730), Wagner et al. (U.S. Patent 5,846,949), Beach et al. (U.S. Patent No. 6,025,192) or the Stratagene Catalog (1988). These rejections are also traversed.

Eshhar et al. describe expression vectors for the expression of chimeric TCR, wherein the TCR V-domain is replaced by the V-domain of an antibody. The expression vectors described by Eshhar therefore generally differ from those of the presently claimed invention, which are used for the expression of native, complete two-chain TCR consisting of TCR V- and C-domains. It is true that with the expression vectors described by Eshhar et al. and those of the present invention, both expression vectors are based on a cassette system with prepared TCR C-domains. Nevertheless, Eshhar et al. provides no indication of an expression vector representing a fusion construct of two vectors to a bicystronic expression unit.

Hence, artificial cassette intersections are generated according to the presently claimed invention, which do not cause an amino acid exchange in the finished polypeptide and thus produce native, complete two-chain TCR.

Therefore, the subject matter of the present application is thus both novel and would not have been obvious over Eshhar et al. Also any combination of Eshhar et al. and Bitler et al. (U.S. Patent No. 6,140,484), Waldron (U.S. Patent No. 6,048,730), Wagner et al. (U.S. Patent No. 5,846,949), Beach et al. (U.S. patent No. 6,025,192) or the Stratagene Catalog (1988) does not lead to the subject matter of the present invention.

For at least these reasons, reconsideration and withdrawal of the rejections under 35 U.S.C. § 102(e) and 35 U.S.C. § 103(a) are respectfully requested.

Conclusion

Applicants respectfully submit that this application is in condition for allowance and such action is earnestly solicited. If the Examiner believes that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below to schedule a personal or telephone interview to discuss any remaining issues.

Please charge any fee deficiency or credit any overpayment to Deposit

Account No. 01-2300.

Respectfully submitted,

A handwritten signature in black ink, reading "Robert K. Carpenter". The signature is fluid and cursive, with the first and last names being more prominent.

Robert K. Carpenter
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